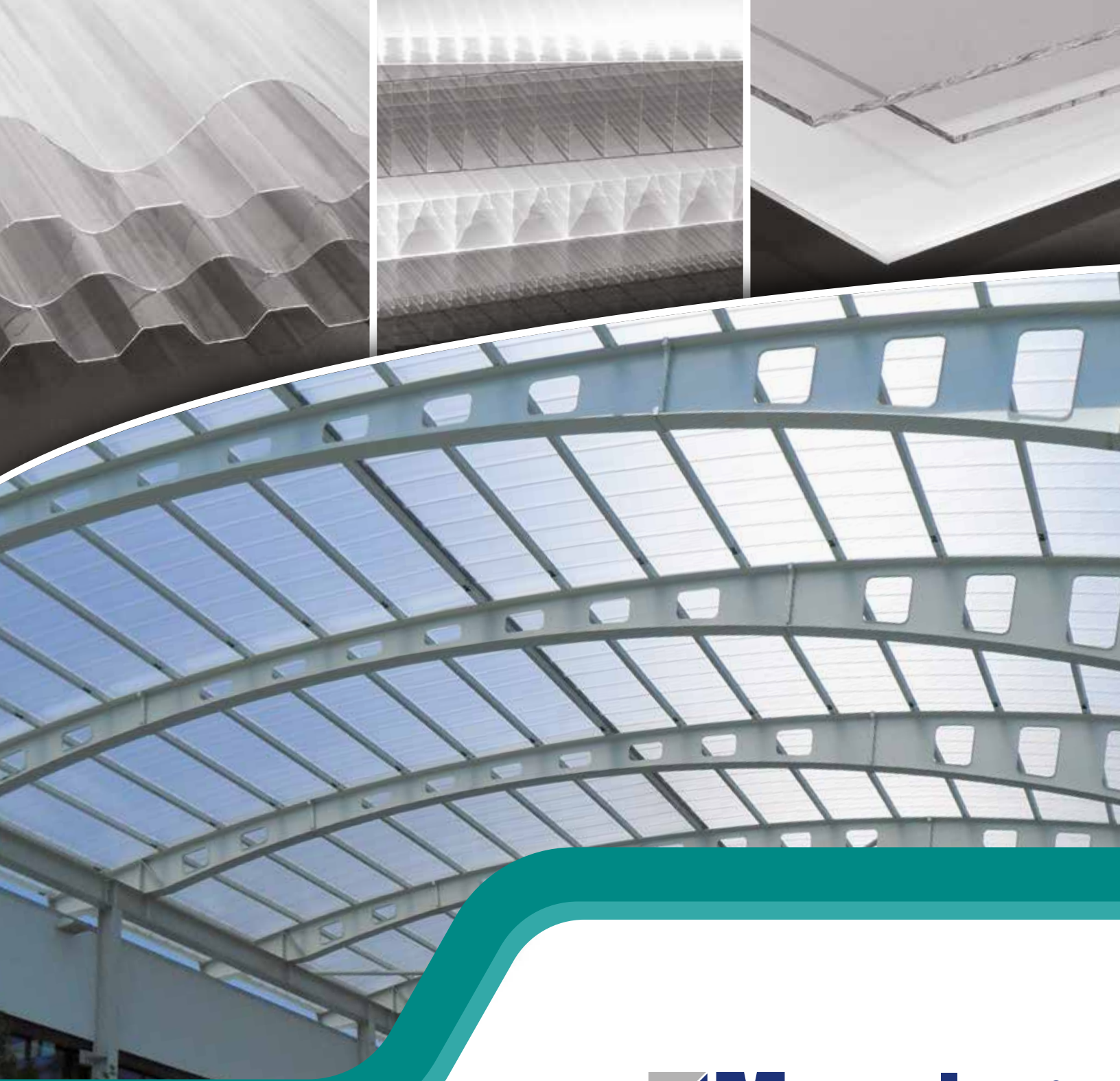

Macrolux®

POLYCARBONATE SHEETS

EN

swiss made

INDUSTRY · COMMERCIAL BUILDING · PUBLIC CONSTRUCTION · ARCHITECTURE · GREENHOUSES · HOUSING · RURAL · SPORTS FACILITIES

WARRANTY G10 10 YEARS

STABILIT AMERICA
Moscow, Tennessee

STABILIT CANADA
Inglewood, Ontario

STABILIT BENELUX
Benthuizen, Holland

STABILIT SUISSE
Stabio, Switzerland

STABILIT ITALIA
Stabio, Svizzera

STABILIT MEXICO
García, México
Tlalnepantla, México

STABILIT FRANCE
Chassal, France

STABILIT EUROPA
Córdoba, España

Stabilit Suisse SA is part of a multinational group of companies producing semi-finished plastic materials, focused on the construction industry, as well as other areas including transport and general manufacturing.

Our synergy gives strength to our worldwide presence across a range of products and industries, providing the highest level of technical and logistical support.

Stabilit Suisse SA is an industry leader in the production of polycarbonate sheets and systems. Situated in Switzerland and with a team of over 100 skilled employees, our plant consists of the best quality extrusion technology, along with an in-house R&D laboratory and QA department.

1980
Founded
E.M.P. SA

1997
Founded
POLITEC SA

2012
Merfer
in Koscon
Industrial SA

2017
Acquisition
by Verzatec
Group

2018
Taking name
Stabilit Suisse SA

With over 40 years of polycarbonate manufacturing experience, **Stabilit Suisse SA**, along with our Macrolux brand, holds a strong worldwide reputation, with sales in over 40 countries across five continents, from South America to the Asia-Pacific region.

Our extensive range of products are recognised across international regions for their light-weight, thermal insulating, impact-resistant, light-transmitting and fire behavioural performance. This combination of properties gives way to ranging applications, such as architectural and large-scale construction, as well as lighting, DIY, automotive industry, interior design and furniture.

Stabilit

Macrolux®

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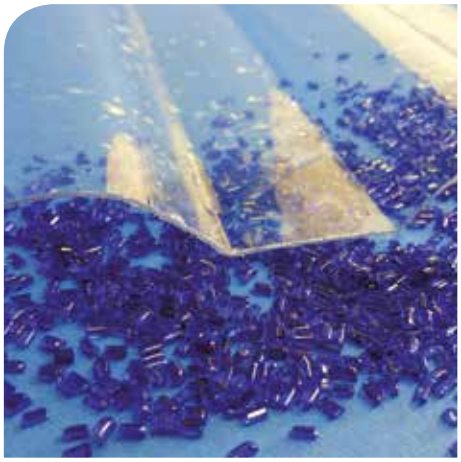

Macrolux®

POLYCARBONATE SHEETS AND SYSTEMS

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- Polycarbonate properties

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Macrolux® Multiwall

POLYCARBONATE MULTIWALL SHEETS

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- Macrolux® Multiwall Solar Control

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POLYCARBONATE COMPACT SHEETS

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- Macrolux® Solid XL Solar Control
- Macrolux® Solid NO UV

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Macrolux® Rooflite®

POLYCARBONATE CORRUGATED SHEETS

- **Macrolux® Rooflite®**

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UV PROTECTION

LL

UV protection on one side

Sheets protected from the effects of UV rays on one side.This protection effectively allows the sheets to retain their original transparency and mechanical impact resistance properties for the duration of their service life.

XL

UV protection on both sides

Sheets protected from the effects of UV rays on two sides. Most suitable for applications where exposure to direct and/or indirect solar radiation may be on both sides of the sheet. This co-extrusion process also eliminates installation or processing errors, due to dual coverage with a UV layer.

NO UV

NO UV protection

Low protection from the effects of UV rays, causing potentially rapid degradation to both appearance and performance of the sheet. Ideal for use in internal applications and areas of indirect exposure to solar radiation.

CUSTOMISATION

PLUS

Extra UV protection

Sheets with increased, extra strong protection from UV rays. Ideal for use in areas of direct exposure to harsh environmental conditions.

MINDEW

Condensation resistant treatment

Sheets treated on the inside avoid dripping of condensation in to room space. Particularly suitable for greenhouse and swimming pool applications.

BICOLOR

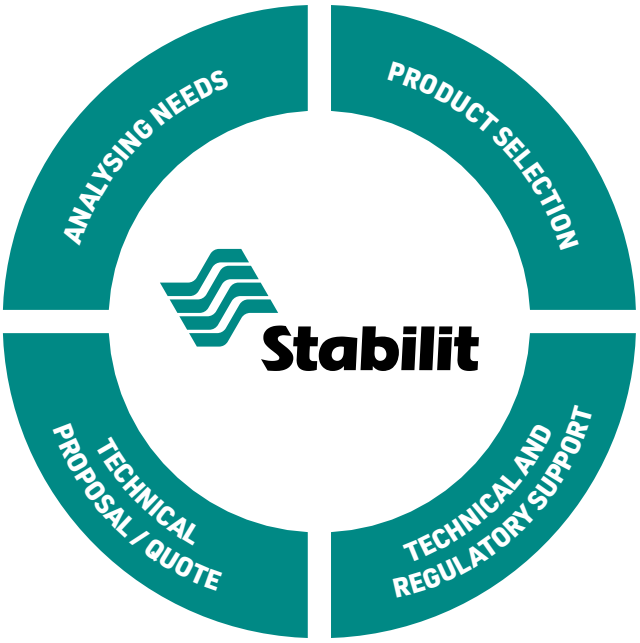
Dual colour

Sheets produced using a special technique, allow for different colours on the inside and outside surfaces. With pleasing aesthetics, these sheets lend themselves to architectural applications.

Customer focus

Stabilit Suisse SA is a leader in innovative daylight solutions, which anticipate customer demands and market trends. **Stabilit Suisse** is the obvious choice for customers looking for a manufacturer who will support their project through from design stage to completion.

An all-round approach to see your project through to success



ANALYSING NEEDS
Identifying exact product requirements is the most intricate stage of the design process. Discussion regarding materials and product capabilities enable the project to go from concept to reality.

PRODUCT SELECTION
At design stage, our customers rely on our team's expertise to decide on product combinations best suited to their project. Our English-speaking technical department can review structural plans and make recommendations accordingly. Samples and technical data sheets are readily available.

TECHNICAL AND REGULATORY SUPPORT
In general, each structural project should conform to its own individual technical and environmental requirements. In addition, building regulations require that the project meets both technical and cost specifications.

TECHNICAL PROPOSAL / QUOTE
The final stages of the joint process, where customer and supplier's cooperation often ends is where Stabilit Suisse's support continues. We are here to help with subsequent installation, both remotely and onsite.

Assistance to ensure correct installation

OUR GREATEST AMBITION IS FOR THE APPLICATION TO BE A SUCCESS.

Stabilit Suisse SA also provides assistance on-site, ensuring correct product installation and long-term performance. Our aim is to provide overall customer satisfaction and to present our range as a showcase in each and every application.

Product certification

Stabilit Suisse products are certified by internationally accredited bodies and institutions.

Our sales department will be more than happy to give you detailed information on which certificates are available and on tested products.

Company certification

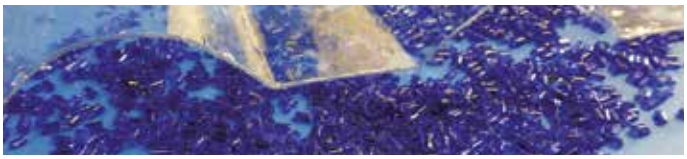
ISO 9001 certification

Our ISO 9001 certification provides assurance in terms of quality, service and testing of all raw materials we use, requiring adherence to the highest standards and compliance with strict control procedures.

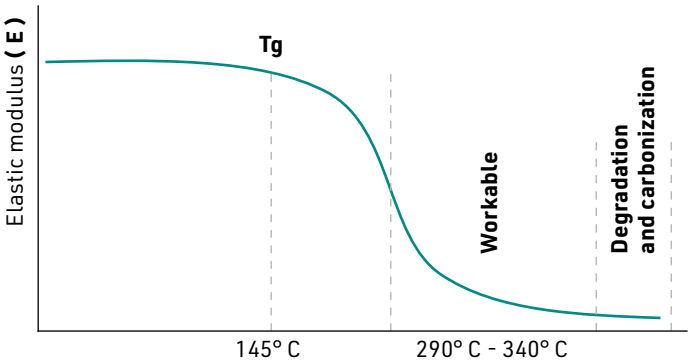
COMPANY WITH
QUALITY SYSTEM
CERTIFIED BY DNV
ISO 9001

POLYCARBONATE

- **Transparency 89%**
- **Dimensional stability from -40°C to +130°C**
- **High impact resistance**
- **Self-extinguishing (oxygen index 28%)**
- **Low creep**
- **Low density (1,21 g/cm³)**
- **Excellent thermal and electric insulation**
- **Extremely low moisture absorption (0,3%)**
- **Good UV resistance**



Morphological structure: Amorphous Aromatic Polymer
Polyester Family
High Tg (138°C ~ 145°C)



Elastic modulus E_{PC} = 2300 N/mm²

Polycarbonate properties

Polycarbonate is a thermoplastic polymer boasting excellent mechanical and physical properties. It is both ductile and hard-wearing, giving way to use in such applications as aircraft glazing, automotive headlight covers, riot shields, face protection etc. The above properties, along with its high level of transparency, make polycarbonate the perfect polymer in many building applications.

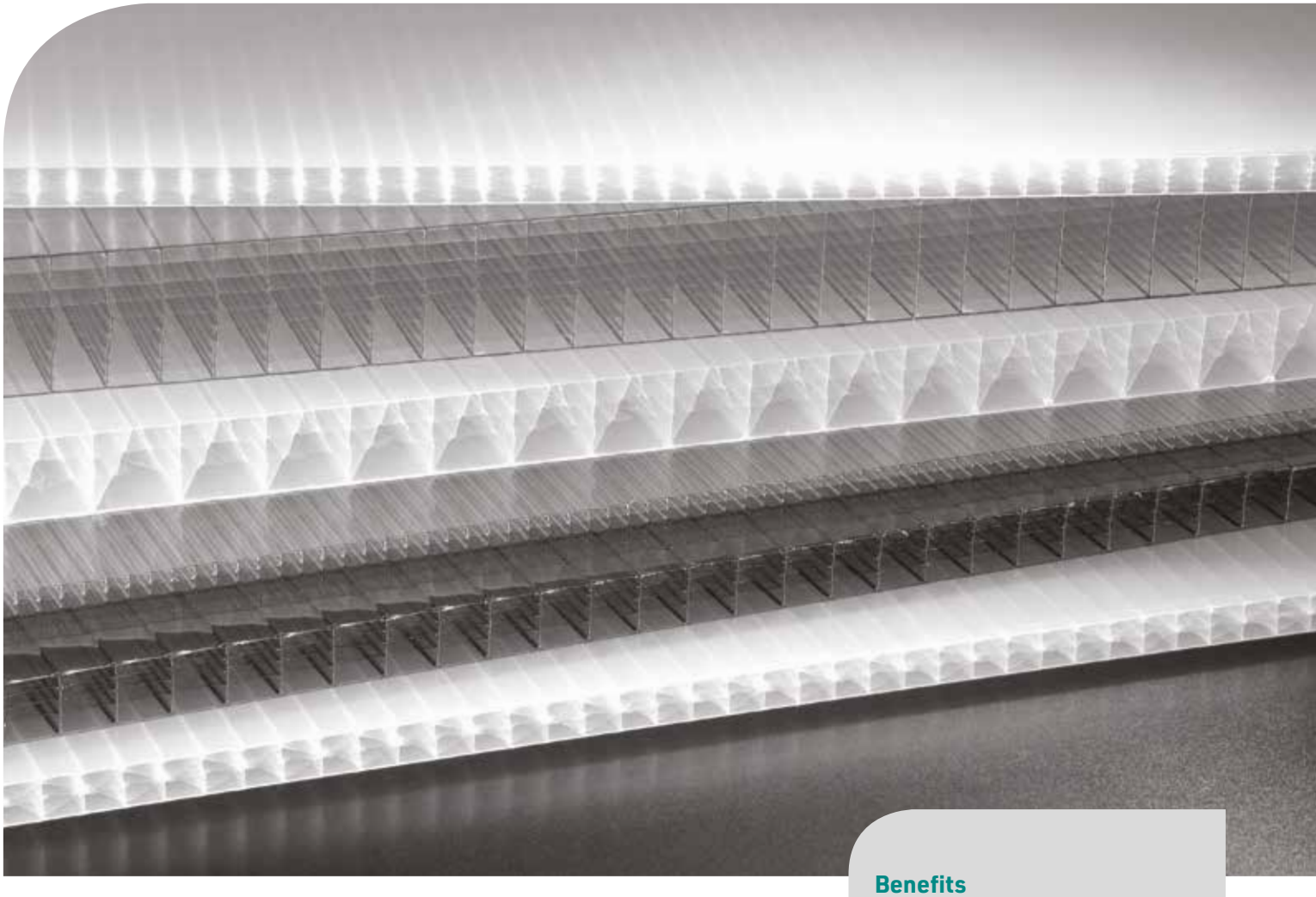
PC: main advantages	
Light weight and transparency	lighter structure
Can be produced in low thicknesses	lighter weight
Self-extinguishing	good reaction to fire performance
Versatile to use	cold bending and thermoforming
Possibility of different colors	wide range of design possibilities
Wide choice of surface finishes	plain, embossed, painted and metallic
Impact	ductile break = no shards in event of breakage
Dimensional stability	guaranteed long term
Compliance with industry standards	thermal insulation, loads, fire behaviour
LCA (Life Cycle Assessment)	favourable and totally recyclable at end of life cycle

TECHNICAL DATA		VALUE	UNIT	STANDARD
Mechanical properties				
Yield stress (50 mm/min)		63	MPa	ISO 527
Stress at break (50 mm/min)		70	MPa	ISO 527
Yield strain (50 mm/min)		6	%	ISO 527
Strain at break (50 mm/min)		120	%	ISO 527
Tensile modulus (1 mm/min)		2350	MPa	ISO 527
Impact properties				
Charpy V-notched impact strength	+ 23°C	75	kJ/m^2	ISO 179/1eA
	- 30°C	15	kJ/m^2	ISO 179/1eA
Izod notched impact strength	+ 23°C	70	kJ/m^2	ISO 180/1A
	- 30°C	12	kJ/m^2	ISO 180/1A
Physical properties				
Density		1,2	g/cm^3	ISO 1183
Water absorption (23°C; saturation)		0,35	%	ISO 62
Moisture absorption (23°C; 50% RH)		0,15	%	ISO 62
Water vapor permeability (23°C; 85% RH; 0,1 mm)		15	$g/(m^2\ 24h)$	ISO 15106-1
Thermal properties				
Coefficient of linear thermal expansion (23°C÷55°C)		65×10^{-5}	1/K	ISO 11359-2
Thermal conductivity		0,20	W/mK	ISO 8302
Vicat softening temperature (50N; 120°C/h)		145-149	°C	ISO 306
				Typical values referred to polycarbonate as raw material.

Comparison with other products

Compared to glass and many commonly used construction plastics, polycarbonate demonstrates superiority across a variety of technical properties.

	U.M.	PC	PMMA	PVC	PET	GRP	GLASS
Density	g/cm^3	1,20	1,19	1,38	1,33	1,42	2,50
Strength	kJ/m^2	70	2	4	3	1,2	-
Modulus of elasticity	N/mm^2	2.350	3.200	3.200	2.450	6.000	70.000
Linear thermal expansion	1/K	$6,5 \times 10^{-5}$	$7,5 \times 10^{-5}$	$6,7 \times 10^{-5}$	$5,0 \times 10^{-5}$	$3,2 \times 10^{-5}$	$0,9 \times 10^{-5}$
Thermal conductivity	W/m K	0,20	0,19	0,13	0,24	0,15	1,3
Max. service temperature	°C	120°	90°	60°	80°	140°	240°
UV transparency	%	4	40	nd	nd	19	80
Fire performance	-	very good	poor	poor	good	poor	excellent
Resistance to weathering	-	good	very good	poor	fair	poor	excellent
Chemical compatibility	-	fair	fair	good	good	good	very good
							Typical values referred to different materials.



Macrolux® Multiwall

Macrolux® Multiwall sheets are a result of the most advanced extrusion manufacturing techniques. Its multiwall structure enables the product to withstand the most demanding external applications. Available in thicknesses ranging from 4mm to 60mm and with a wide choice of structures, **Macrolux® Multiwall** is at the cutting edge of efficiency and energy savings and both its optical and mechanical properties.

LL XL NO UV

Benefits

- **Lightweight**
- **High thermal insulation**
- **Excellent impact resistance**
- **Good light transmission**
- **Good fire performance**
- **Guaranteed and certified quality**
- **UV protection**

WARRANTY G10 10 YEARS

Main advantages of Macrolux® Multiwall

Impact resistance

Polycarbonate's mechanical properties give this technical polymer the highest impact resistance across extruded transparent sheets, providing optimum protection against accidental and weather related damage. This impact protection level outperforms other transparent extruded products, such as acrylic and PET and also standard glass. This impact resistance remains constant across a wide temperature range.

Thermal expansion

Thermal expansion is a characteristic in materials which have a tendency to change in dimensions over fluctuating temperatures. This expansion is quantified via a coefficient that, in the case of polycarbonate, equates to $6{,}5x10^{-5}$ 1/K (0.065 mm/m°C). This coefficient value being significantly higher than other materials commonly used in roofing and joinery, such as aluminium, steel and glass, requires solutions to compensate for the higher degree of thermal expansion. Stabilit Suisse are able to offer recommendation during the design stage.

Light transmission

Structural lighting design requires that building interiors receive optimum levels of natural light. It is therefore important to use sheets which allow the required level of light transmission. **Macrolux® Multiwall** makes up a wide range of structures, thickness and colours to suit all needs and ease of selection at design stage.

Warranty

UV protected sheets come with a standard 10 year warranty against yellowing, loss of light transmission and hail damage. Our sales department will be happy to provide you with exact warranty terms.

Curve radius

Macrolux® Multiwall sheets can effectively be cold-bended, eliminating the need for any heat treatment and increase in static load values. This makes for ease of use in applications requiring curved panels, such as domes, barrel vaults, canopies etc. Cold bending radius varies depending on the thickness and structure of the sheet. More information is available on request.

Thermal transmittance

Thermal transmittance, or U-value, is the mean flow of heat per m^2 that passes through a substrate. In this case, polycarbonate sheet separates two environments of different temperatures (usually a heated or air-conditioned room from outdoors). The lower this U-value, the more effective the insulation is offered by the sheet. In order to reduce heating/cooling costs, which consequently lowers harmful emissions, international standards require both building materials and fenestration systems to meet increasingly strict thermal transmittance requirements. With our extensive range of multiwall sheets, **Stabilit Suisse SA** is at the cutting edge when it comes to providing customers with the most appropriate solutions in compliance with current standards.

UV protection

Our co-extruded UV protective layer breaks down harmful rays which lead to yellowing and degradation of the exposed surface. The UV layer is applied using in-line co-extrusion technology, offering a shielding layer to the polycarbonate against solar radiation. This technology provides resistance to weathering and also protects against otherwise unsuitable maintenance.

Macrolux® Multiwall LL

Macrolux® Multiwall LL feature a UV layer, protecting the sheet from rapid degradation caused by the harmful effects of sunlight. This protection effectively enables the sheets to retain their original transparency and mechanical properties throughout the period of their service life. The UV-protected side features a coloured protective film, displaying corresponding information on the surface. **Macrolux® Multiwall LL**'s long-life attributes make this product suitable in ranging applications.

- **Flat and curved roofing**
- **Insulating glazing**
- **Partitions**
- **Greenhouse glazing**
- **Skylights**
- **Canopies**
- **False ceilings**

Structure

2W

Thicknesses: 4 - 6 - 8 - 10 mm

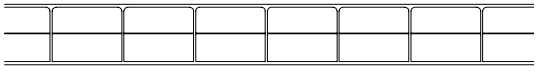
3Q

Thicknesses: 6 - 8 - 10 mm

4W

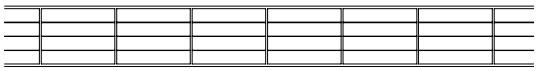
Thicknesses: 6 - 10 mm

3W



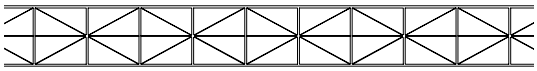
Thickness: 16 mm

5W



Thicknesses: 16 - 25 mm

5X

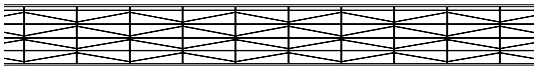


Thickness: 16 mm

7W

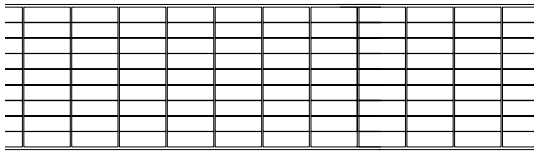
Thicknesses: 16 - 20 - 25 mm

10X



Thicknesses: 20 - 25 - 32 - 35 - 40 mm

10W



Thicknesses: 40 - 50 - 55 - 60 mm

Macrolux® Multiwall LL technical data

STRUCTURE	THICKNESS (mm)	WEIGHT (kg/m²)	LIGHT TRANSMISSION (LT) % **			U VALUE*** (W/m²K)
			CLEAR (0010)	OPAL (0037)	BRONZE (0024)	
2W	4	0,8	82	64	25	3,9
2W	6	1,3	82	60	25	3,5
2W	8	1,5	81	60	25	3,2
2W	10	1,7	81*	54*	25	3,0
3Q	6	1,3	75	60	23	3,4
3Q	8	1,5	75	60	23	3,0
3Q	10	1,7	75	55	23	2,7
4W	6	1,3	70	41	---	3,1
4W	10	1,75	69*	57*	25	2,5
3W	16	2,7	72	40	25	2,2
5W	16	2,7	66*	46*	25	1,9
5W	25	3,3	60	25	20	1,6
5X	16	2,5	64*	47*	20	2,0
7W	16	2,5	57*	39*	25	1,8
7W	20	3,1	56*	38*	23	1,6
7W	25	3,3	50	24	---	1,4
10X	20	3,2	41	26	---	1,5
10X	25	3,4	38	17	18	1,3
10X	32	3,7	47*	10	---	1,1
10X	35	3,8	32	9	12	1,1
10X	40	4,3	28	7	---	1,0
10W	40	4,2	39	16	14	1,0
10W	50	5,0	37	11	---	0,9
10W	55	5,2	36	---	---	0,8
10W	60	6,0	31	---	---	0,8

For detailed technical data please refer to our Macrolux® Multiwall technical manual or to specific technical data sheets.

***** Values calculated according to EN410 and EN14500 standard in conformity to the indications of the norm EN16153.

****** Values measured according to ASTM standard unless otherwise indicated.

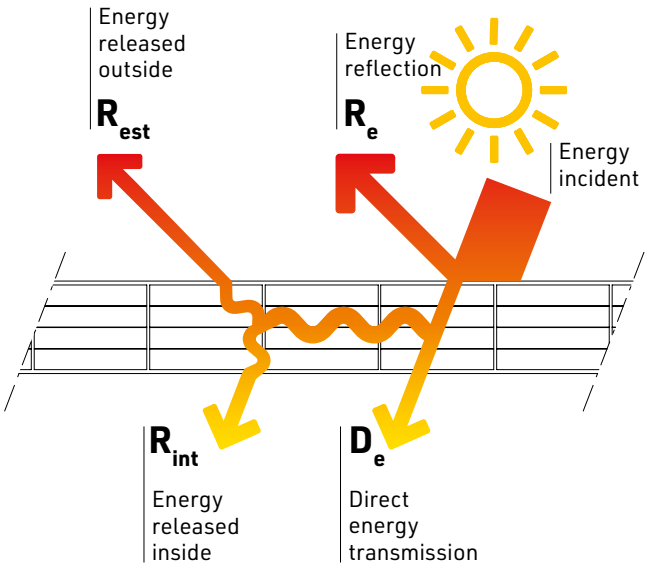
***** U Value**: Values certified and calculated values according to EN 10077-2 standard by using the definitions of EN 673 standard.

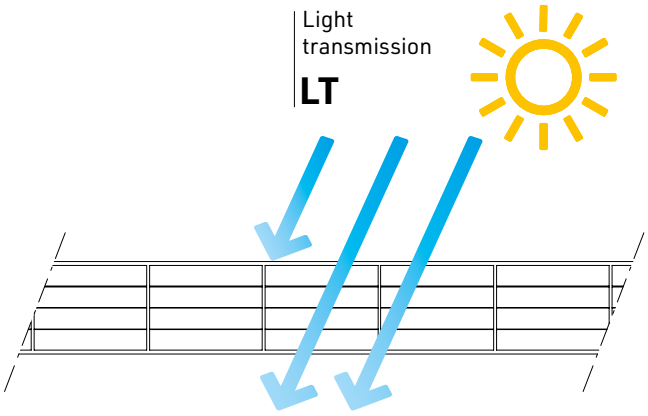
For other thicknesses, colors and variants ask our sales offices.

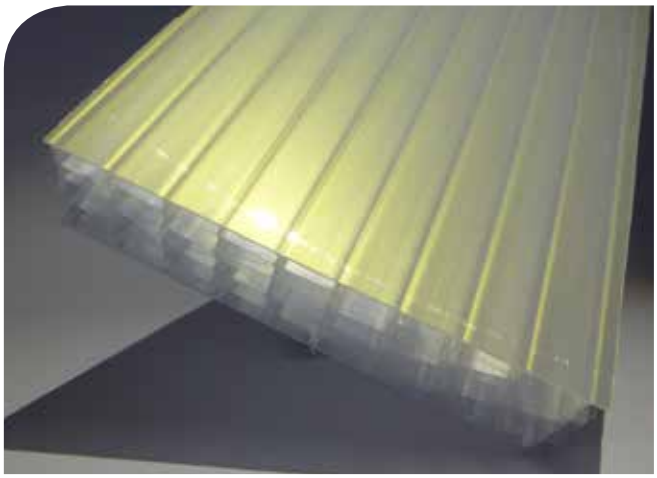
Macrolux® Multiwall Solar Control

Macrolux® Multiwall IR / AT / HS sheets are solar reflective sheets which retain all the special properties of Macrolux® Multiwall LL sheets, whilst successfully reducing the passage of solar energy which causes excessive heat build-up in indoor environments. Macrolux® Multiwall Solar Control sheets lend themselves to larger areas with extensive glazing, providing increased comfort inside the building whilst minimising use of air-conditioning.

- **Flat and curved roofing**
- **Insulating glazing**
- **Partitions**
- **Skylights**
- **Canopies**





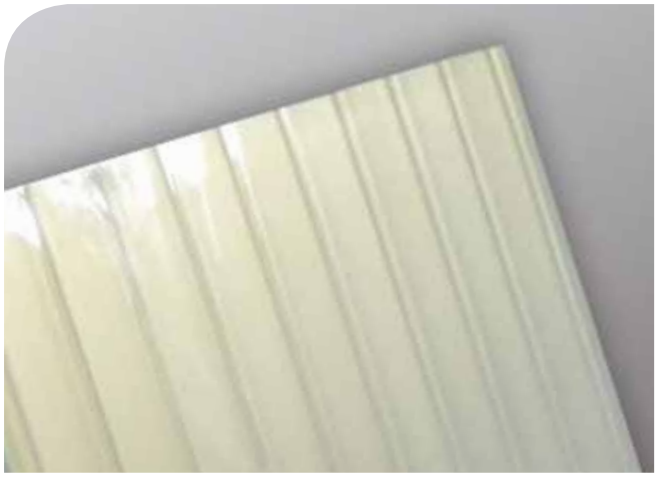


Macrolux® Multiwall IR

The **IR treatment** contains particular dispersed additives that allow the infrared component of solar radiation to be well-absorbed by re-emitting it in the form of heat (R_{est}). The light transmission (LT) of the polycarbonate sheets is retained in the transparent versions (IR green 0430), while in the IR-gold versions (IR-gold / opal 0809 or IR-gold / crystal 0810), there is an iridescent effect and increased opacity. The gold effect combined with the IR additive, increases the reflected energy (R_{est}), improving protection inside the building against IR rays and enhancing comfort.

Macrolux® Multiwall Athermic

Athermic treatment, applied to the sheets during extrusion, disperses a special chemical compound throughout the product, enabling absorption of infrared light which is then reversed back out of the sheet in the form of heat. This particular finish is suitable in applications where low light transmission, together with low energy transmission is required. It is available in Athermic Grey (0777) or in Bi-Colour versions, such as Athermic Grey/Opal (0737) Blue Athermic/Opal (0537), which are ideal for integrating different colours in to the architectural space.



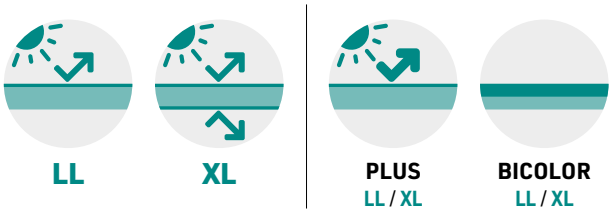
Macrolux® Multiwall HS

In addition to a traditional UV protective layer, metal powders are added to the material to create our Multiwall **HS**. This additive allows the material to reflect the infrared component of solar energy from the external surface of the sheet (Re). The metallic effect offers aesthetic value to the external surface of the product (Reflect/Opal 0305), with an opal-based sheet offering excellent lighting diffusion and effect to the surrounding area.

Macrolux® Multiwall Solar Control

Macrolux® Multiwall IR / AT / HS s a solar control multiwall polycarbonate which, whilst retaining the special properties of Macrolux® Multiwall LL, successfully reduces the level of infrared radiation passing through the material and thus eliminating the 'greenhouse effect'. The product lends itself to large open areas with extensive glazing, where maintaining a comfortable temperature without a need for air-conditioning is required.

- **Flat and curved roofing**
- **Insulating glazing**
- **Partitions**
- **Skylights**
- **Canopies**



Structure

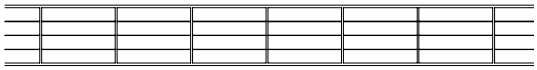
3Q

Thicknesses: 6 - 8 - 10 mm

4W

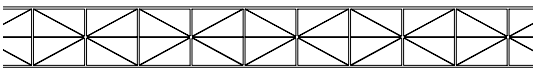
Thicknesses: 6 - 10 mm

5W



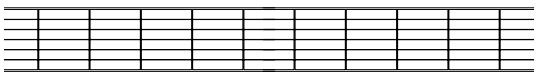
Thicknesses: 16 - 25 mm

5X



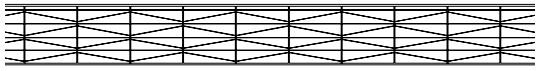
Thickness: 16 mm

7W



Thicknesses: 16 - 20 - 25 mm

10X



Thicknesses: 20 - 25 - 32 mm

Macrolux® Multiwall Solar Control technical data

STRUCTURE	THICKNESS (mm)	WEIGHT (kg/m²)	LIGHT TRASMISSION (LT) % **							
			IR			ATHERMIC				HS
			IR GREEN (0430)	IR GOLD / CLEAR (0810)	IR GOLD / OPAL (0809)	BLUE AT / OPAL (0536)	BLUE AT / OPAL (0537)	GRAY AT / OPAL (0736)	GRAY AT / OPAL (0737)	REFLECT OPAL (0305)
3Q	10	1,7	65	---	---	15	45	15	45	65
4W	10	1,75	60	---	40*	---	---	---	43	62
5W	16	2,7	---	48	---	3	25	3	25	55
5W	25	3,3	45	40	---	---	20	---	20	50
5X	16	2,5	54	43	26	3	25	3	25	---
7W	16	2,5	50	38	23	---	25	---	18	46
7W	20	3,1	---	36	22	---	---	---	17	44
7W	25	3,3	45	33	21	---	---	---	---	42
10X	25	3,4	---	27	15	---	---	---	---	---
10X	32	3,7	---	26*	13	---	6	---	6	15

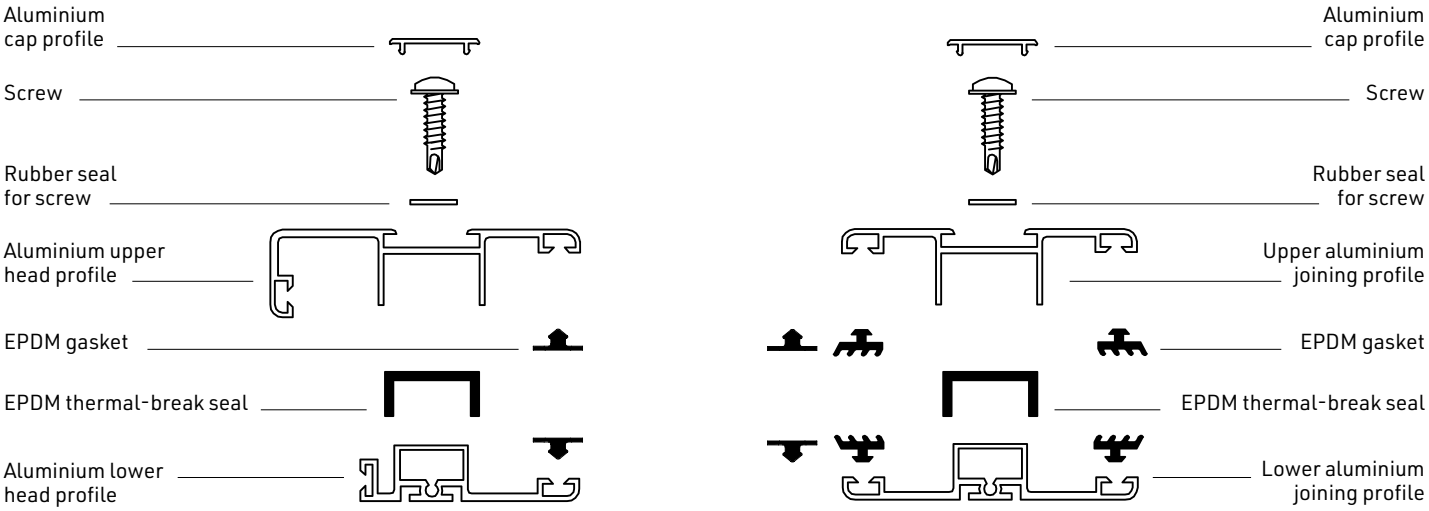
For detailed technical data please refer to our Macrolux® Multiwall technical manual or to specific technical data sheets.

***** Values calculated according to EN410 and EN14500 standard in conformity to the indications of the norm EN16153.

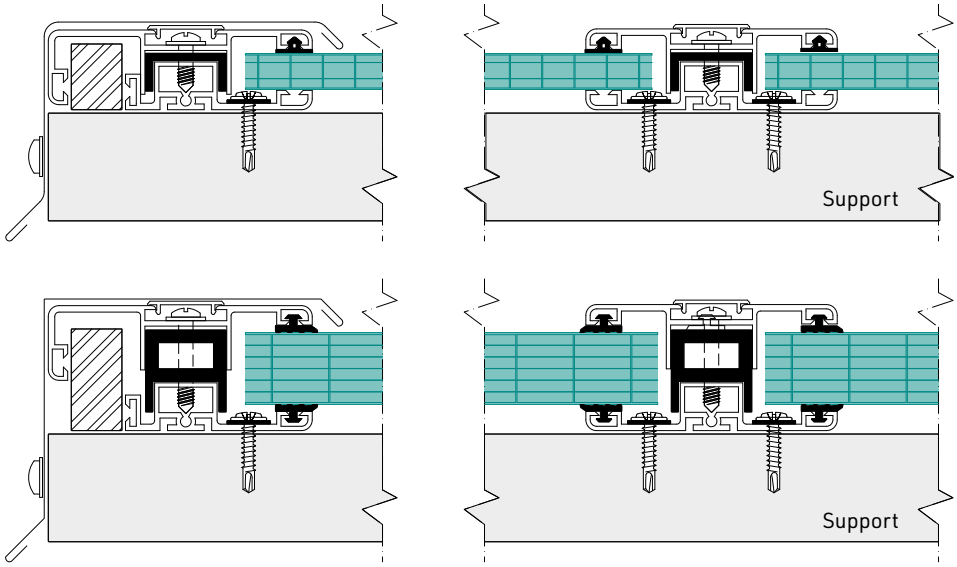
****** Values measured according to ASTM standard unless otherwise indicated.

For other thicknesses, colors and variants ask our sales offices.

Accessories

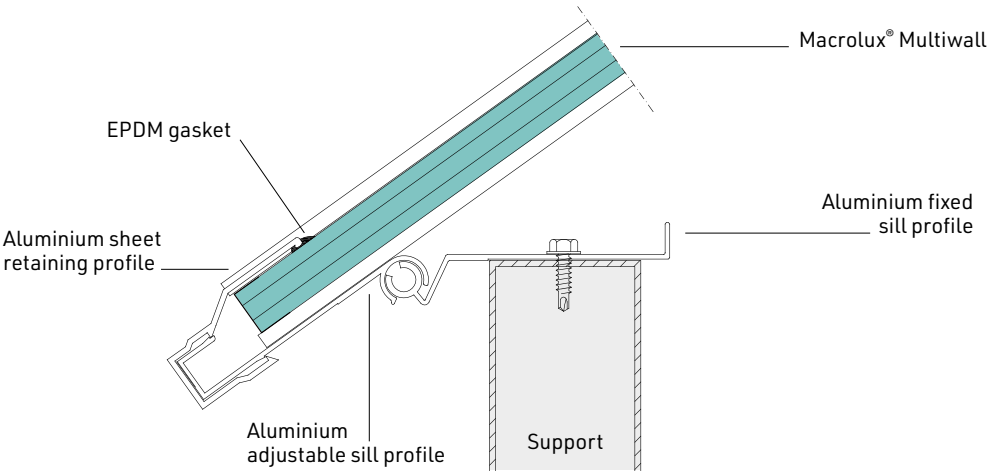


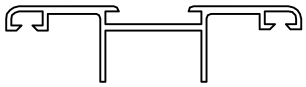
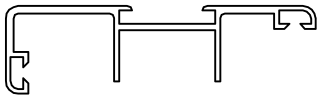
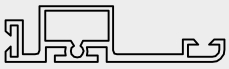
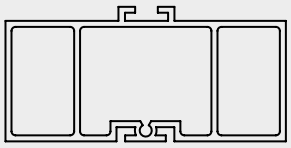
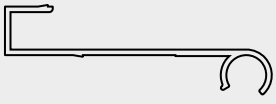
ASSEMBLY [A]
Aluminium head profile

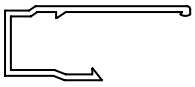
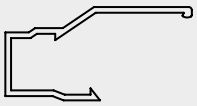
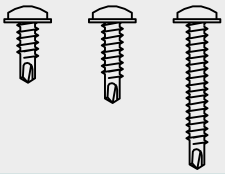


ASSEMBLY [B]
Aluminium joining profile

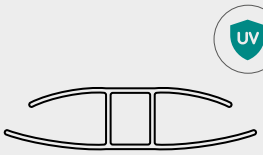
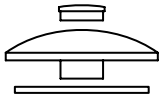
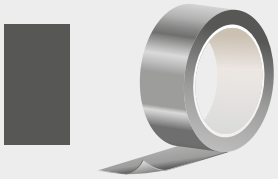
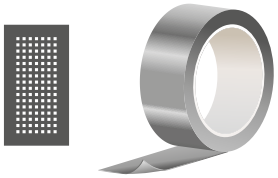
ASSEMBLY [C]
Lateral view



ACCESSORY [SCHEME]	DIM. (mm)	TECHNICAL DESIGN
Upper aluminium joining profile (Cod. M9S7) **[B]**	6000	
Lower aluminium joining profile (Cod. M9S8) **[B]**	6000	
Aluminium upper head profile (Cod. M9S9) **[A]**	6000	
Aluminium lower head profile (Cod. M9T0) **[A]**	6000	
Aluminium cap profile (Cod. M9T1) **[A] [B]**	6000	
Aluminium strengthening profile (Cod. M9T2)	6000	
Aluminium fixed sill profile (Cod. M9R6) **[C]**	6500	
Aluminium adjustable sill profile (Cod. M9R7) **[C]**	6500	

ACCESSORY [SCHEME]	DIM. (mm)	TECHNICAL DESIGN
Aluminium 10 mm sheet retaining profile (Cod. M9R4) **[C]**	5700	
Aluminium 16 mm sheet retaining profile (Cod. M9R5) **[C]**	5700	
EPDM gasket (Cod. M926) **[C]**	---	
EPDM gasket 1 mm thick (Cod. M9S3) **[A] [B]**	---	
EPDM gasket 3 mm thick (Cod. M9S5) **[A] [B]**	---	
EPDM thermal-break seal for 6/8/10 and 16 mm (Cod. M9T5) **[A] [B]**	---	
EPDM thermal-break seal for 20 and 25 mm (Cod. M9T9) **[A] [B]**	---	
Screws (Cod. MS01) (Cod. MS02) (Cod. MS03) **[A] [B]**	4,2 x 13 4,2 x 19 4,2 x 32	
Rubber seal (Cod. MS04) **[A] [B]**	---	

Accessories

ACCESSORY	CODE		DIM. (mm)	TECHNICAL DESIGN
PC U profile (UV protected)	U 6 mm	MU06	2100 / 6000	
	U 10 mm	MU10		
	U 16 mm	MU16		
	U 20 mm	M636		
	U 25 mm	M637		
PC H profile (UV protected)	H 6 mm	MH06	6000	
	H 10 mm	MH10		
	H 16 mm	MH16		
	H 20 mm	M433		
	H 25 mm	M434		
Washer with seal	6 mm	M960	---	
	10 mm	M961		
	16 mm	M962		
Aluminium adhesive tape (50 m roll)	height 25 mm	M967	---	
	height 38 mm	M965		
	height 50 mm	M957		
	height 70 mm	M966		
Aluminium adhesive breather tape (50 m roll)	height 38 mm	M968	---	
	height 50 mm	M969		
	height 70 mm	M970		
	height 70 mm	MXA8		

Always check availability of accessories with our commercial offices.

Macrolux® Solid

Macrolux® Solid compact sheets are the ideal solution in applications where impact resistance and excellent light transmission are primary requirements, for example, in glazing, parapets, canopies, skylights, curved roofing systems, general signage, road signage and noise reduction barriers. **Macrolux® Solid** sheets come in thicknesses ranging from 3mm-15mm and in a choice of translucent and opaque colours.

XL

NO UV

Benefit

- **Lightweight**
- **Excellent impact resistance**
- **Excellent light transmission**
- **Good fire performance**
- **Guaranteed and certified quality**
- **UV protection**
- **Extremely versatile to use**

WARRANTY G10 10 YEARS

Main advantages of Macrolux® Solid

Impact resistance

Polycarbonate's mechanical properties give this technical polymer the highest impact resistance across extruded transparent sheets, providing optimum protection against accidental and weather related damage. This impact protection level outperforms other transparent extruded products, such as acrylic and PET and also standard glass. This impact resistance remains constant across a wide temperature range.

Thermal transmittance

Whilst benefitting from the same appearance as glass, **Macrolux® Solid** sheets have far superior thermal transmittance values. In order to reduce costly heating and air-conditioning usage which produce harmful emissions, international standards require building materials and fenestration systems to meet increasingly strict thermal transmittance requirements.

Light transmission

Structural lighting design requires that building interiors receive optimum levels of natural light. It is therefore important to use sheets which allow the required level of light transmission. With similar properties in this respect to glass, **Macrolux® Solid** offers excellent levels of light transmission, even with the use of additional colours.

Warranty

UV protected sheets come with a standard 10 year warranty against yellowing, loss of light transmission and hail damage. Our sales department will be happy to provide you with exact warranty terms.

Curve radius

Macrolux® Solid sheets can effectively be cold-bended, eliminating the need for any heat treatment and increase in static load values. This makes for ease of use in applications requiring curved panels, such as domes, barrel vaults, canopies etc. Cold bending radius varies depending on the thickness and structure of the sheet. More information is available on request.

Thermal expansion

Thermal expansion is a characteristic in materials which have a tendency to change in dimensions over fluctuating temperatures. This expansion is quantified via a coefficient that, in the case of polycarbonate, equates to $6{,}5 \times 10^{-5}$ 1/K (0.065 mm/m°C). This coefficient value being significantly higher than other materials commonly used in roofing and joinery, such as aluminium, steel and glass, requires solutions to compensate for the higher degree of thermal expansion. Stabilit Suisse are able to offer recommendation during the design stage.

UV protection

Our co-extruded UV protective layer breaks down harmful rays which lead to yellowing and degradation of the exposed surface. The UV layer is applied using in-line co-extrusion technology, offering a shielding layer to the polycarbonate against solar radiation. This technology provides resistance to weathering and also protects against otherwise unsuitable maintenance.

Macrolux® Solid XL

Macrolux® Solid XL sheets are monolithic polycarbonate sheets with dual-sided UV protection. The sheets are perfect in areas exposed to the harmful effects of direct sunlight. Thanks to the co-extruded UV protective layer applied on both sides, not only is cutting well optimised, but incorrect assembly is reduced to a minimum. Furthermore, lasting stability is ensured in both optical and mechanical properties and the product offers a uniquely superior performance in terms of transparency, impact resistance, mechanical strength, machinability and adaptability across a wide range of applications. In addition, Macrolux Solid XL maintains both exceptional chemical resistance and physical performance.

- **Skylights**
- **Glazing**
- **Opening frames**
- **External partitions**
- **Noise barriers**
- **Safety glazing**
- **Parapets**
- **Canopies**

XL | **PLUS**

Thickness (mm) | **3** | **4** | **5** | **6** | **8** | **10** | **12** | **15**

Macrolux® Solid XL technical data

THICKNESS (mm)	WEIGHT (kg/m²)	LIGHT TRANSMISSION (LT) %*			STANDARD SIZES** (width x length)	U VALUE*** (W/m²K)
		CLEAR (0010)	OPAL (0332)	BRONZE (0220)		
3	3,6	88	56	52	2050 x 3050 2050 x 6110	5,4
4	4,8	87	48	52		5,3
5	6,0	87	42	52		5,1
6	7,2	86	36	52		5,0
8	9,6	85	28	52	2050 x 3050	4,8
10	12,0	83	23	52		4,5
12	14,4	81	---	52		4,3
15	18,0	80	---	---		4,1

For detailed technical data please refer to our Macrolux® Solid technical manual or to specific technical data sheets.

***** Values calculated according to ASTM standard.

****** The availability of the dimensions indicated may vary depending on the color required.
Please check availability with our commercial offices.

***** U Value**: Values calculated according to EN 16240 standard.

Macrolux® Solid XL Solar Control

Macrolux® Solid XL IR is a solar control compact polycarbonate which, whilst retaining the special properties of **Macrolux® Solid XL**, successfully reduces the level of infrared radiation passing through the material and thus eliminating the 'greenhouse effect'. The product lends itself to large open areas with extensive glazing, where maintaining a comfortable temperature without a need for air-conditioning is required.

- **Skylights**
- **Glazing**
- **Opening frames**
- **External partitions**
- **Noise barriers**
- **Safety glazing**
- **Parapets**
- **Canopies**

XL

PLUS

Thickness (mm) | 3 | 4 | 5 | 6 | 8 | 12 |

Macrolux® Solid XL IR technical data

THICKNESS (mm)	WEIGHT (kg/m²)	LIGHT TRANSMISSION (LT) %*					STANDARD SIZES** (width x length)	U VALUE*** (W/m²K)
		IR GREEN (0430)	IR BLUE (0545)	IR PURPLE (0630)	IR GRAY (0638)	IR GOLD/OPAL (0832)		
3	3,6	62	---	62	---	41	2050 x 3050 2050 x 6110	5,4
4	4,8	62	---	---	---	---		5,3
5	6,0	---	---	---	---	---		5,1
6	7,2	62	47	---	---	---		5,0
8	9,6	62	---	---	---	---		4,8
12	14,4	---	---	---	51	---	2050 x 3050	4,3

For detailed technical data please refer to our Macrolux® Solid technical manual or to specific technical data sheets.

***** Values calculated according to ASTM standard.

****** The availability of the dimensions indicated may vary depending on the color required.
Please check availability with our commercial offices.

***** U Value**: Values calculated according to EN 16240 standard.


XL / XL IR


XL / XL IR


XL / XL IR

Macrolux® Solid NO UV

Macrolux® Solid NO UV sheets are monolithic polycarbonate sheets with no UV protection. They are suitable in internal applications of indirect exposure to sunlight, such as security glazing, guards for industrial machinery and internal partitions.

- **Internal partitions**
- **Internal protections**
- **Machinery guards**
- **Industry**

NO UV

Thickness (mm) | **3** | **4** | **5** | **6** | **8** | **10** | **12** | **15**

Macrolux® Solid NO UV technical data

THICKNESS (mm)	WEIGHT (kg/m²)	LIGHT TRANSMISSION (LT) %*			STANDARD SIZES** (width x length)	VALORE U*** (W/m²K)
		CLEAR (0010)	OPAL (0332)	BRONZE (0220)		
3	3,6	88	56	52	2050 x 3050 2050 x 6110	5,4
4	4,8	87	48	52		5,3
5	6,0	87	42	52		5,1
6	7,2	86	36	52		5,0
8	9,6	85	28	52	2050 x 3050	4,8
10	12,0	83	23	52		4,5
12	14,4	81	---	52		4,3
15	18,0	80	---	---		4,1

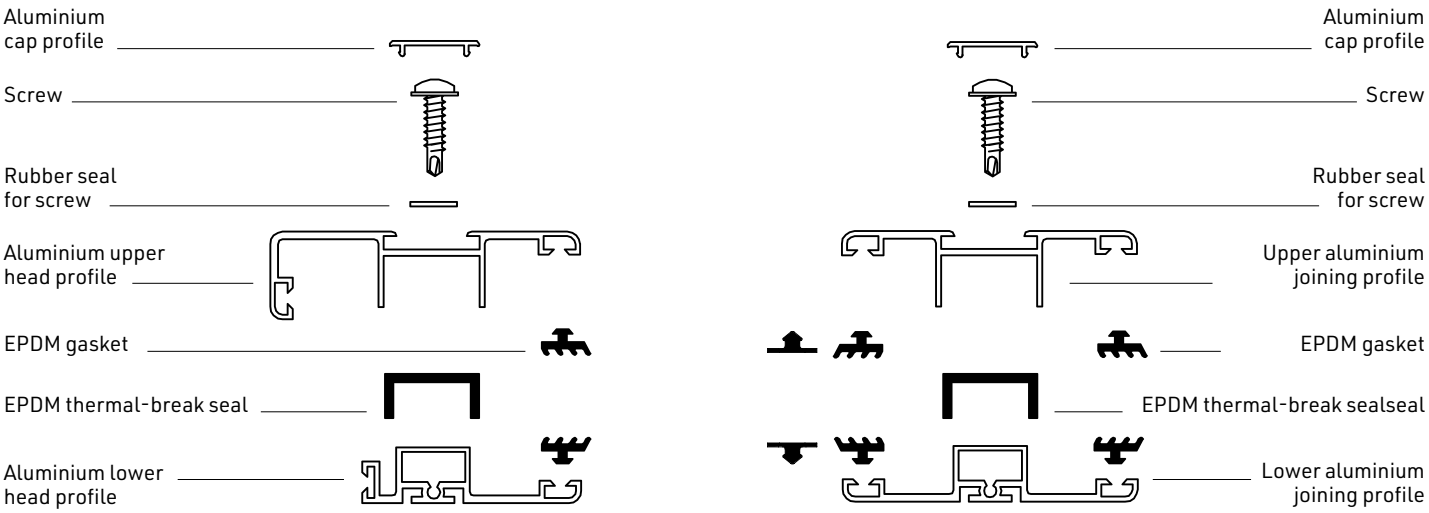
For detailed technical data please refer to our Macrolux® Solid technical manual or to specific technical data sheets.

***** Values calculated according to ASTM standard.

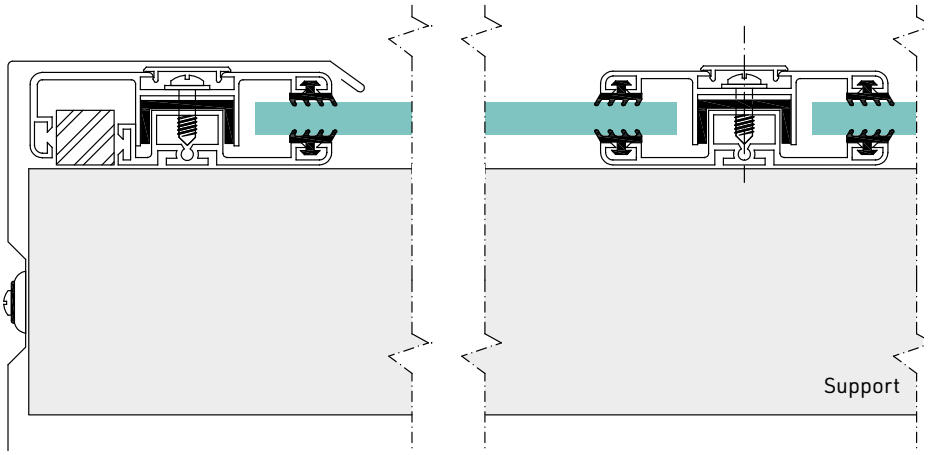
****** The availability of the dimensions indicated may vary depending on the color required.
Please check availability with our commercial offices.

***** U Value**: Values calculated according to EN 16240 standard.

Accessories

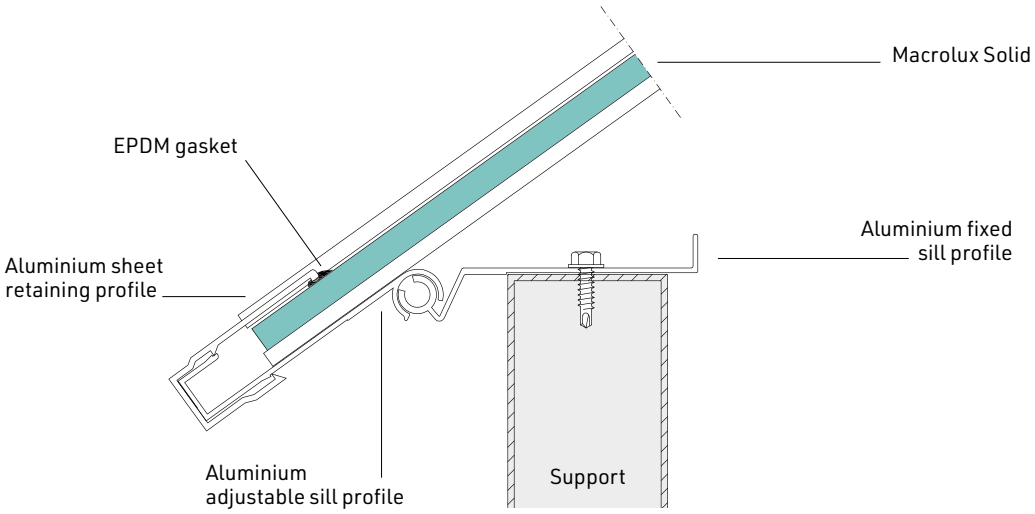


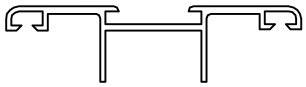
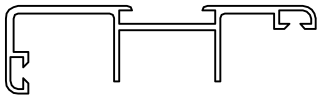
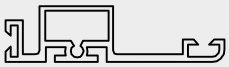
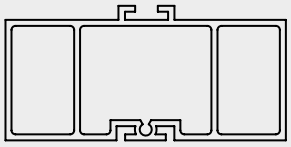
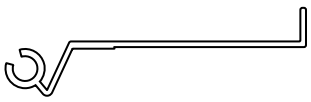
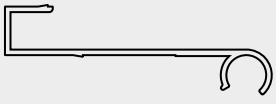
ASSEMBLY [A]
Aluminium head profile

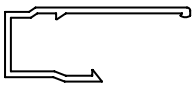
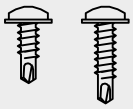


ASSEMBLY [B]
Aluminium joining profile

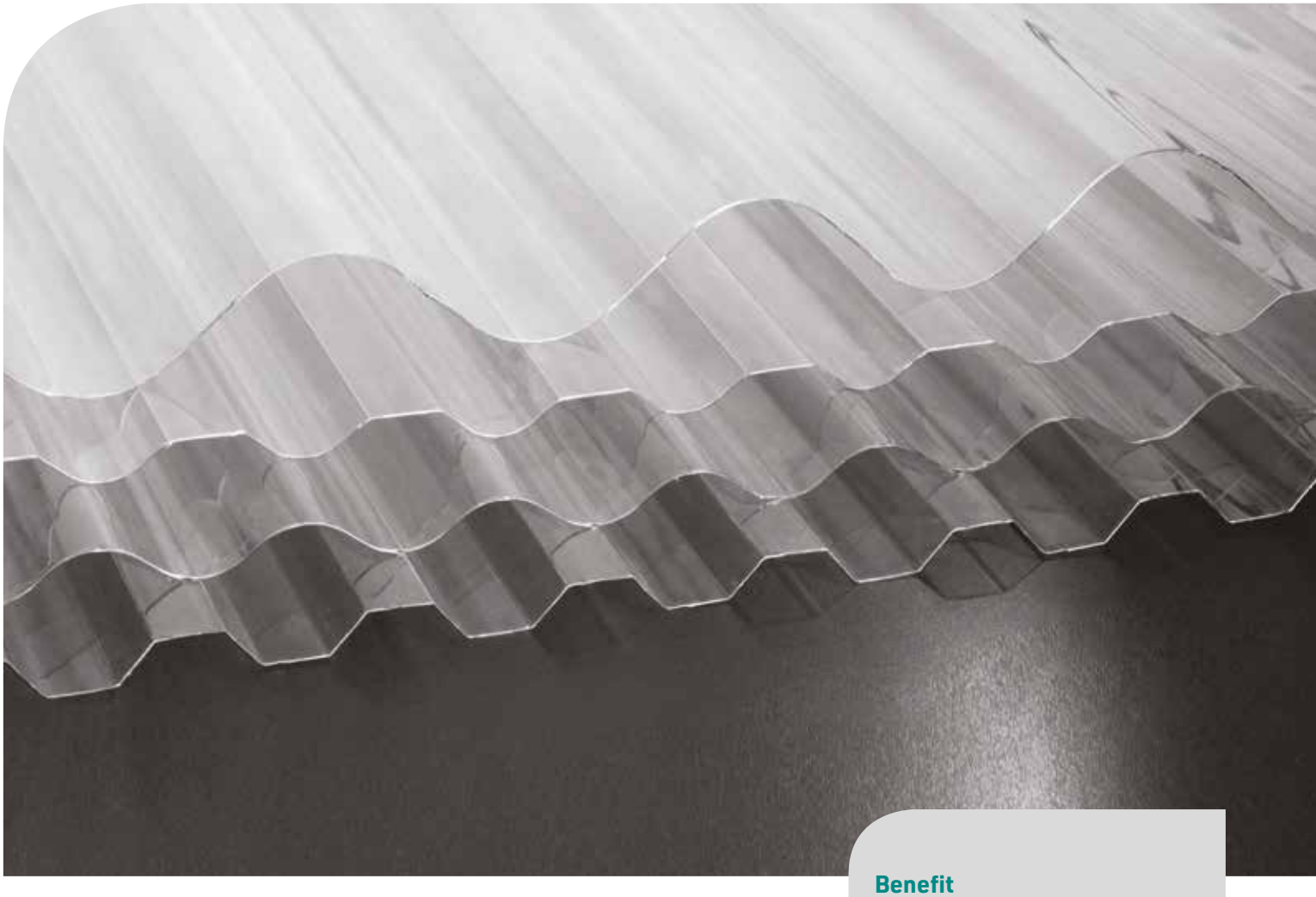
ASSEMBLY [C]
Lateral view



ACCESSORY [SCHEME]	DIM. (mm)	TECHNICAL DESIGN
Upper aluminium joining profile (Cod. M9S7) **[B]**	6000	
Lower aluminium joining profile (Cod. M9S8) **[B]**	6000	
Aluminium upper head profile (Cod. M9S9) **[A]**	6000	
Aluminium lower head profile (Cod. M9T0) **[A]**	6000	
Aluminium cap profile (Cod. M9T1) **[A] [B]**	6000	
Aluminium strengthening profile (Cod. M9T2)	6000	
Aluminium fixed sill profile (Cod. M9R6) **[C]**	6500	
Aluminium adjustable sill profile (Cod. M9R7) **[C]**	6500	

ACCESSORY [SCHEME]	DIM. (mm)	TECHNICAL DESIGN
Aluminium 10 mm sheet retaining profile (Cod. M9R4) **[C]**	5700	
EPDM gasket (Cod. M926) **[C]**	---	
EPDM gasket 1 mm thick (Cod. M9S3) **[A] [B]**	---	
EPDM gasket 3 mm thick (Cod. M9S5) **[A] [B]**	---	
EPDM thermal-break seal (Cod. M9T5) **[A] [B]**	---	
Screws (Cod. MS01) (Cod. MS02) **[A] [B]**	4,2 x 13 4,2 x 19	
Rubber seal (Cod. MS04) **[A] [B]**	---	

Always check availability of accessories with our commercial offices.



Macrolux® Rooflite®

Macrolux® Rooflite® sheets come in two options - trapezoidal or sinusoidal - and are designed to cater for various applications in the building, architectural and industrial fields. Available in different shapes and thicknesses, they match perfectly with a wide range of sheet metal profiles from leading manufacturers and/or with sandwich panels. The corrugated sheets are particularly well-suited to agricultural buildings and greenhouses, where a high level of light transmission is a crucial requirement.

LL XL PLUS

Benefit

- **Lightweight**
- **Good impact resistance**
- **Excellent light transmission**
- **Good fire performance**
- **Guaranteed and certified quality**
- **UV protection**
- **Wide range of shape options**

WARRANTY G10 10 YEARS

Main advantages of Macrolux® Rooflite®

Impact resistance

Polycarbonate's mechanical properties give this technical polymer the highest impact resistance across extruded transparent sheets, providing optimum protection against accidental and weather related damage. This impact protection level outperforms other transparent extruded products, such as acrylic and PET and also standard glass. This impact resistance remains constant across a wide temperature range.

UV protection

Our co-extruded UV protective layer breaks down harmful rays which lead to yellowing and degradation of the exposed surface. The UV layer is applied using in-line co-extrusion technology, offering a shielding layer to the polycarbonate against solar radiation. This technology provides resistance to weathering and also protects against otherwise unsuitable maintenance.

Warranty

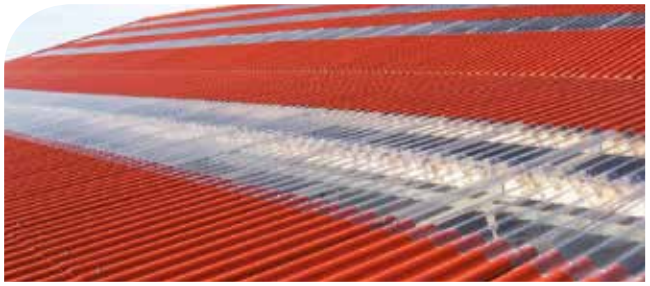
UV protected sheets come with a standard 10 year warranty against yellowing, loss of light transmission and hail damage. I will sales department will be happy to provide you with exact warranty terms.

Thermal expansion

Thermal expansion is a characteristic in materials which have a tendency to change in dimensions over fluctuating temperatures. This expansion is quantified via a coefficient that, in the case of polycarbonate, equates to $6{,}5x10^{-5}$ 1/K (0.065 mm/m°C). This coefficient value being significantly higher than other materials commonly used in roofing and joinery, such as aluminium, steel and glass, requires solutions to compensate for the higher degree of thermal expansion. Stabilit Suisse are able to offer recommendation during the design stage.

Light transmission

Structural lighting design requires that building interiors receive optimum levels of natural light. It is therefore important to use sheets which allow the required level of light transmission. The **Macrolux® Rooflite®** offers a range of choices and an array of colours to suit your architectural project.options to meet your every need.



Macrolux® Rooflite® LL technical data

*****Values measured according to ASTM standard unless otherwise indicated.

THICKNESS (mm)	LIGHT TRANSMISSION (LT) %*		
	CLEAR (0010)	OPAL (0037)	BRONZE (0024)
0,8	89	80	60
1	89	75	55
1,1	89	75	55
1,2	89	75	55

Macrolux® Rooflite®

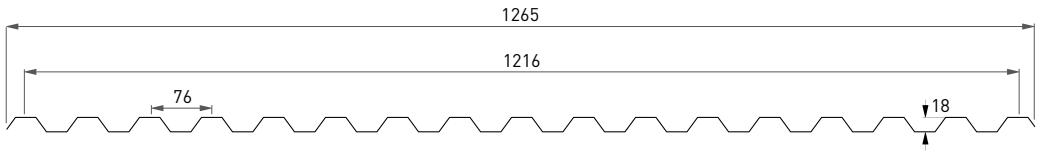
POLYCARBONATE CORRUGATED SHEETS

SHAPE	THICKNESS (mm)
Greca 76/18	Da 0.7 a 1.1
Onda 76/18	Da 0.8 a 1.1
Omega 76.2/16	0.8 / 1.0
Onda 177/51 compatible with Eternit	Da 0.8 a 1.4
Onda 95/35	1.0
Greca 250/40	0.9 / 1.0 / 1.2
Greca 78/21 compatible with Alubel 21	0.9
Greca 111.8/29.1 compatible with Alubel 28	1.0 / 1.1
Greca 250/40 compatible with Alubel (Dach)	1.0
Greca 500/41 compatible with Isolpack (Delta 3A)	0.9 / 1.2
Greca 250/41 compatible with Isolpack (Delta 5A)	1.0
Greca 250/40 compatible with Isolpack (RW1000)	0.9 / 1.0
Greca 117/25 compatible with Isolpack (SL 940)	0.9
Greca 250/41.9 compatible with Italpannelli (Penta)	1.0
Greca 75/20 compatible with Grekor (20/52)	1.0
Greca 112/29 compatible with Copernit (Profilo 29)	1.0
Greca 112/28 compatible with Profilia LG28	1.0
Omega 87.8/24 compatible with Tecno Imac (Ecolina)	1.0
Greca 143/34 compatible with Tecno Imac (Greca 143)	1.1
Greca 193/32 compatible with Ondulit (Coverib 850)	1.0 / 1.2
Greca 333/38 compatible with Metecno A38	1.0 / 1.2
Greca 207/35 compatible with Kloeckner	1.0 / 1.2

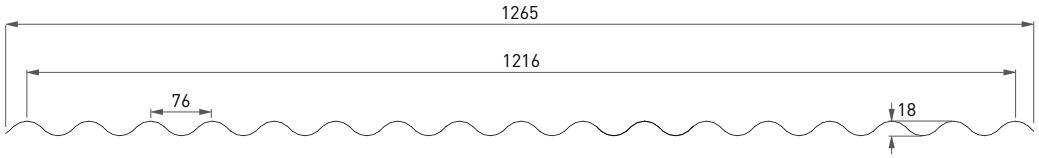
SHAPE	THICKNESS (mm)
Greca 250/39 compatible with Hoesch HP 39/250	1.2
Greca 160/41 compatible with Hoesch HP 41/160	1.2
Greca 250/36 compatible with SAB KD36	1.0
Greca 315/56.8 compatible with SAB 58KD/945	1.0 / 1.2 / 2.0
Greca 137,5/20,3 compatible with Trapezprofil W-20/1100	1.0
Greca 185/40	1.0 / 1.2
Greca 275/30	0.8 / 1.0
Greca 333/39 compatible with Haironville 39/333	1.0 / 1.2
Greca 333/45 compatible with Nervesco 3.45.1000TS	1.0 / 1.2
Greca 250/40 compatible with Cobacier 1004	0.9 / 1.0
Greca 250/35 compatible with Isometall 33.250.1000	1.0
Greca 250/37 compatible with Isometall 37.250.1000	1.0 / 1.1
Greca 200/32 compatible with Hiansa MT32	0.85 / 0.9 / 1.0
Greca 200/42 compatible with Hiansa MT42	0.9 / 1.0 / 1.2
Greca 262.5/32 compatible with Teczone TZ32	0.8 / 0.9 / 1.0
Greca 209/30 compatible with Aceralia	0.9 / 1.0
Greca 144/24.5 compatible with Superpantera	0.8 / 1.0
Greca 171.5/35 compatible with IBR	0.8 / 0.95 / 1.15
Greca 250/40 compatible with Ikon-Utap	0.8 / 0.9 / 1.0
Greca 151/38 compatible with Assanpanel 38/151	1.0 / 1.2
Greca 228.6/19.05 compatible with MB9	0.8
Greca 333.3/38 compatible with Scope 333.5x38	1.0 / 1.2

Other shapes available on request.
Our sales department will be happy to answer any queries you may have.

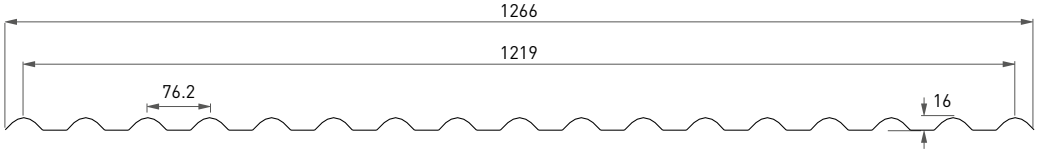
Greca 76 / 18



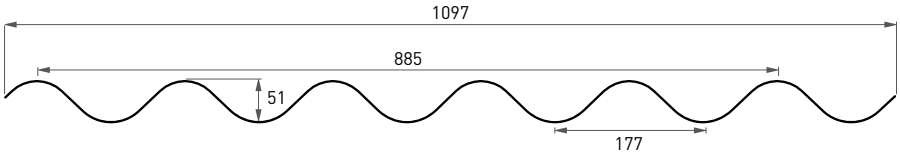
Onda 76 / 18



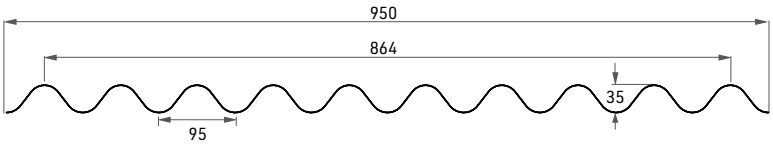
Omega 76.2 / 16



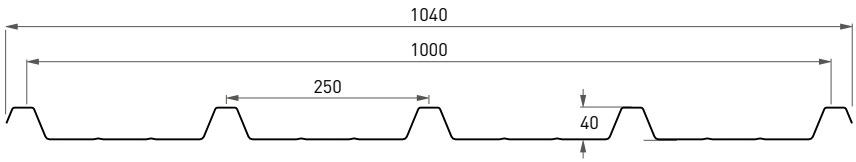
Onda 177 / 51
compatible with Eternit



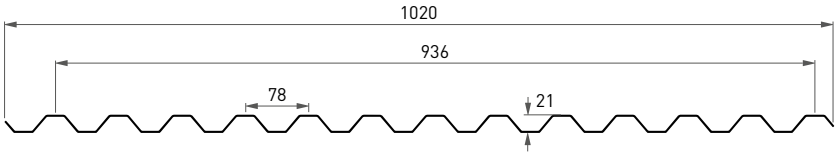
Onda 95 / 35



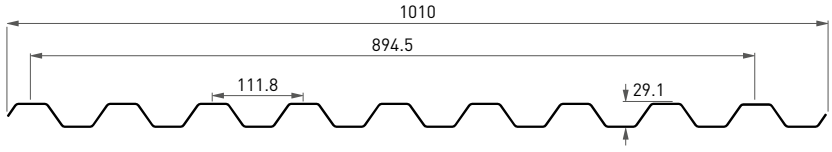
Greca 250 / 40



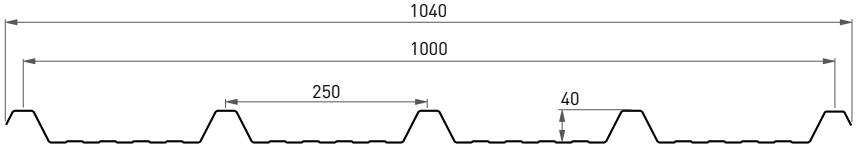
Greca 78 / 21
compatible with Alubel 21



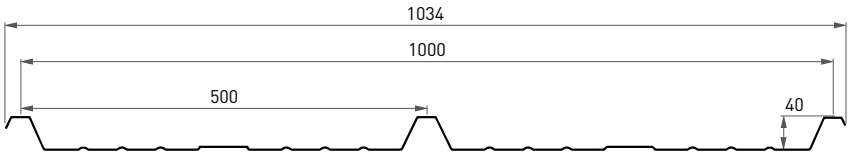
Greca 111.8 / 29.1
compatible with Alubel 28



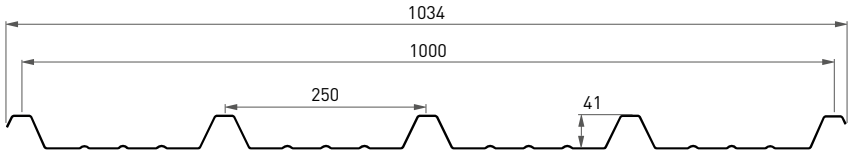
Greca 250 / 40
compatible with Alubel (Dach)



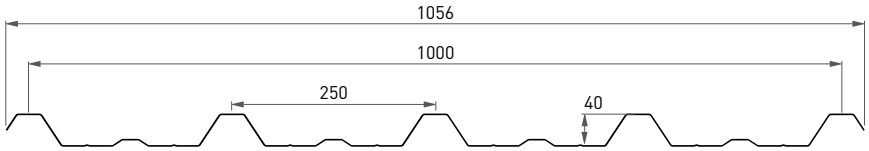
Greca 500 / 41
compatible with
Isolpack (Delta 3A)



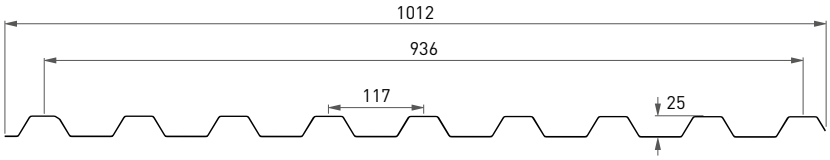
Greca 250 / 41
compatible with
Isolpack (Delta 5A)



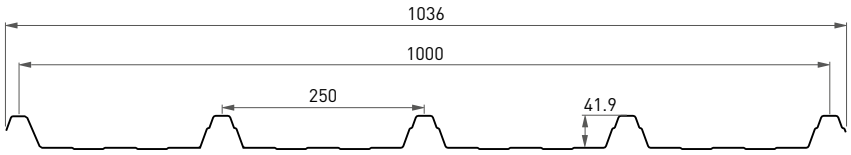
Greca 250 / 40
compatible with
Isolpack (RW1000)



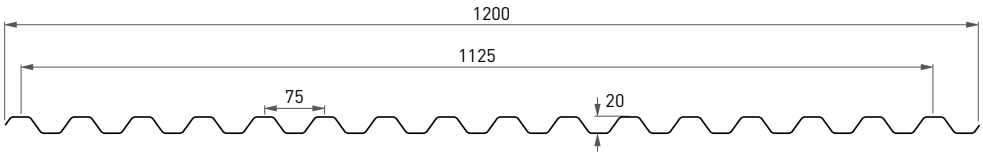
Greca 117 / 25
compatible with
Isolpack (SL 940)



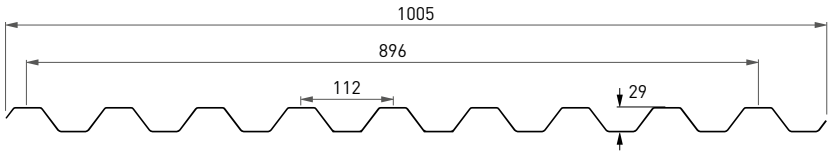
Greca 250 / 41.9
compatible with
Italpannelli (Penta)



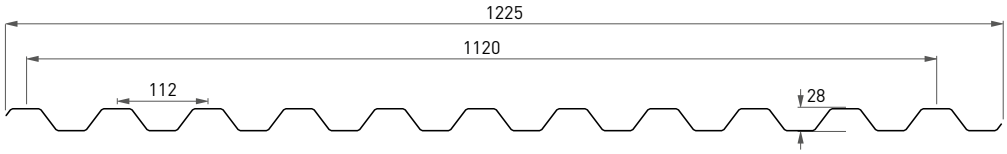
Greca 75 / 20
compatible with
Grekor (20/52)



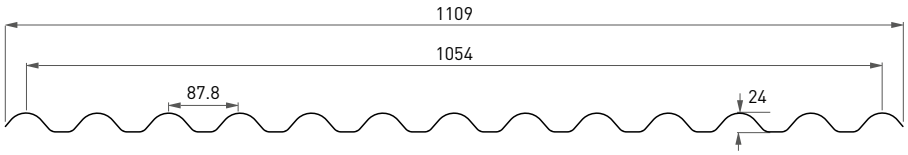
Greca 112 / 29
compatible with
Copernit (Profilo 29)



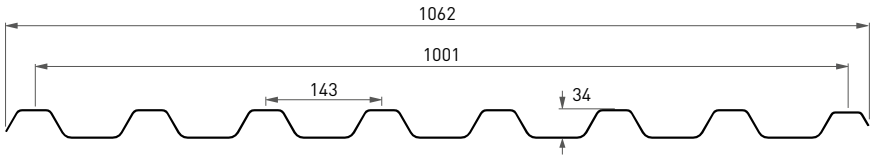
Greca 112 / 28
compatible with
Profilia LG28



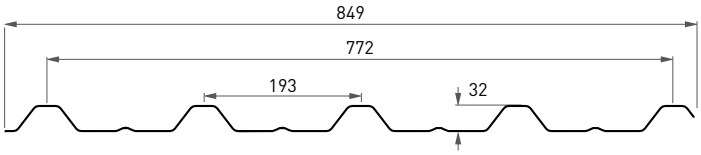
Omega 87.8 / 24
compatible with
Tecno Imac (Ecolina)



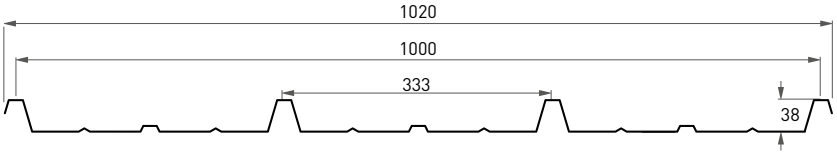
Greca 143 / 34
compatible with
Tecno Imac (Greca 143)



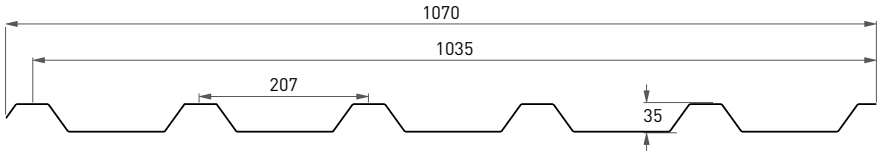
Greca 193 / 32
compatible with
Ondulit (Coverib 850)



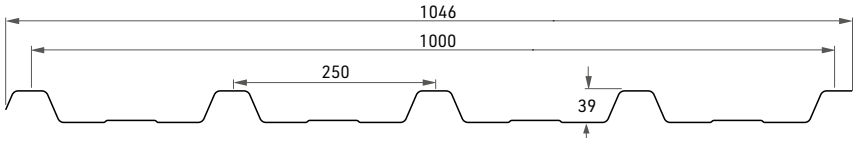
Greca 333 / 38
compatible with
Metecno A38



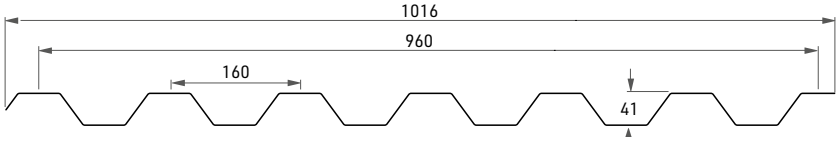
Greca 207 / 35
compatible with
Kloeckner



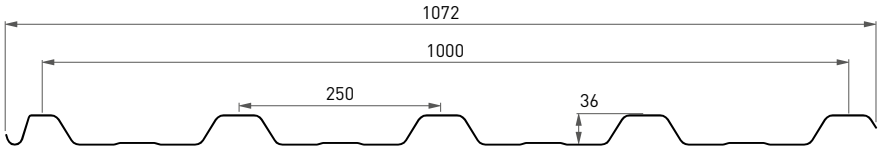
Greca 250 / 39
compatible with
Hoesch HP 39/250



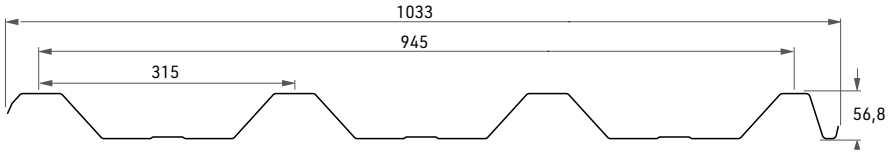
Greca 160 / 41
compatible with
Hoesch HP 41/160



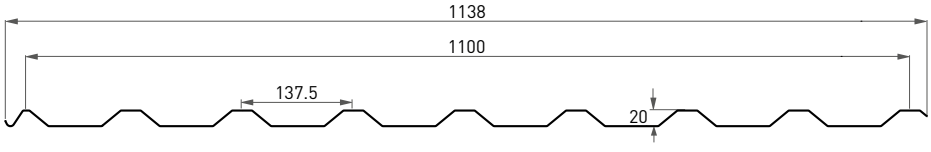
Greca 250 / 36
compatible with
SAB KD36



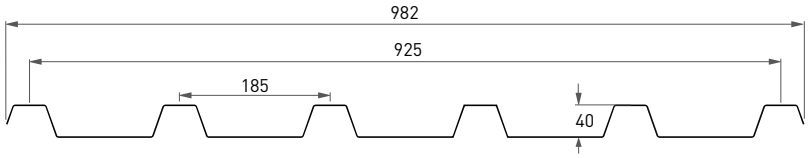
Greca 315 / 56.8
compatible with
SAB 58KD/945



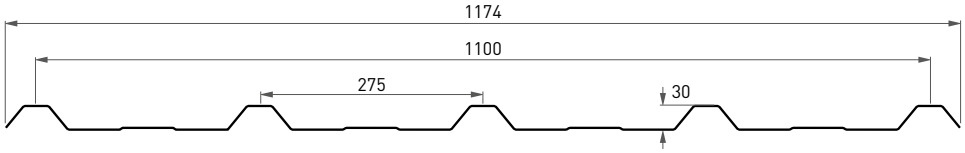
Greca 137,5 / 20,3
compatible with
Trapezprofil W-20/1100



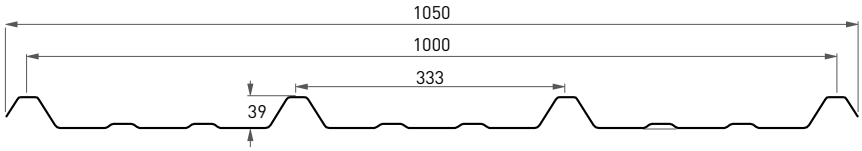
Greca 185 / 40



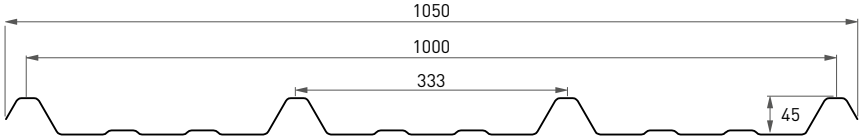
Greca 275 / 30



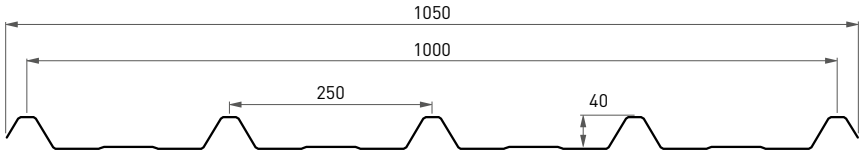
Greca 333 / 39
compatible with Haironville 39/333



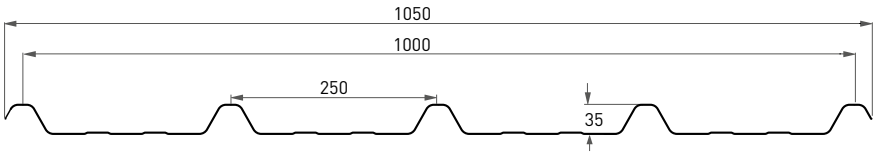
Greca 333 / 45
compatible with Nervesco 3.45.1000TS



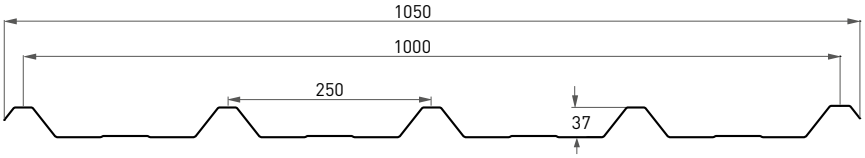
Greca 250 / 40
compatible with Cobacier 1004



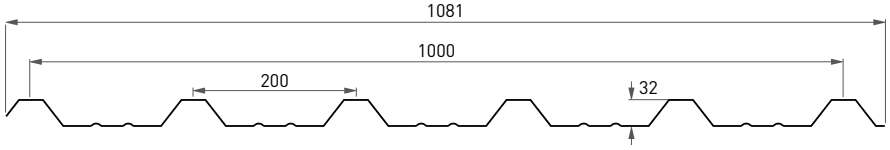
Greca 250 / 35
compatible with Isometall 33.250.1000



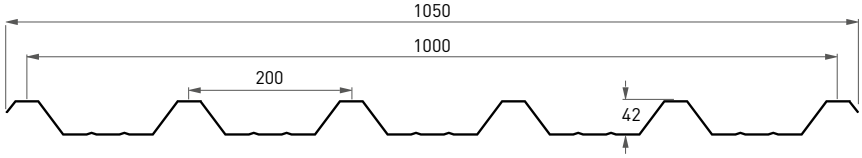
Greca 250 / 37
compatible with Isometall 37.250.1000



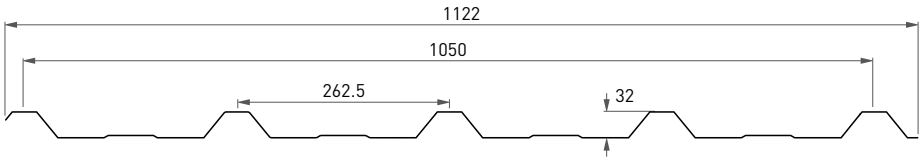
Greca 200 / 32
compatible with Hiansa MT32



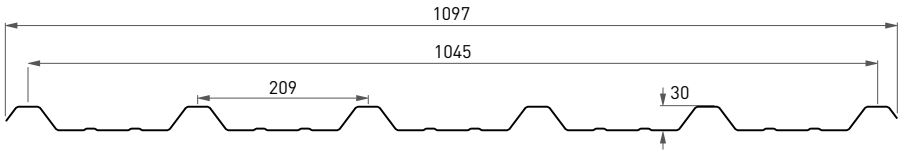
Greca 200 / 42
compatible with Hiansa MT42



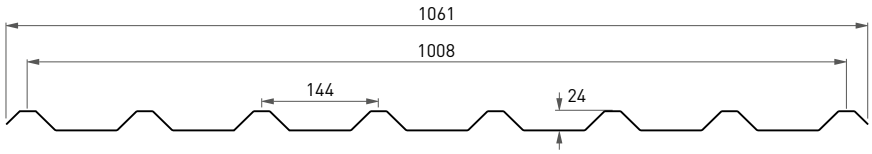
Greca 262.5 / 32
compatible with Teczone TZ32



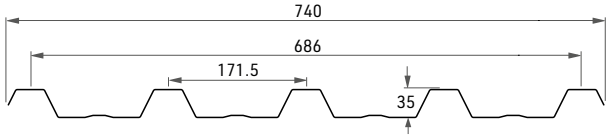
Greca 209 / 30
compatible with Aceralia



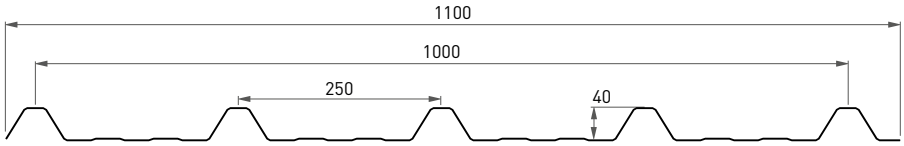
Greca 144 / 24.5
compatible with Superpantera



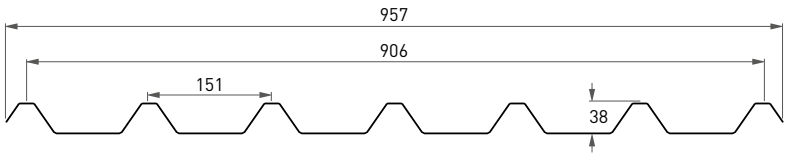
Greca 171.5 / 35
compatible with IBR



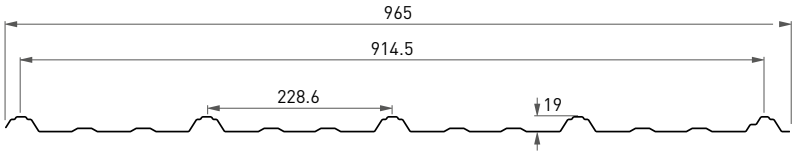
Greca 250 / 40
compatible with Ikon-Utap



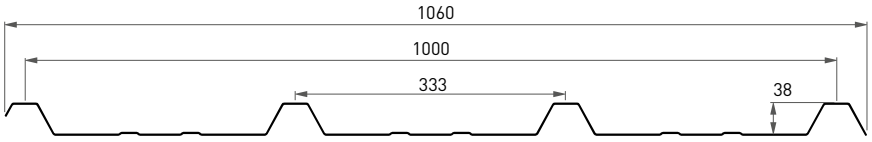
Greca 151 / 38
compatible with Assanpanel 38/151



Greca 228.6 / 19.05
compatible with MB9



Greca 333.3 / 38
compatible with Scope 333.5x38



Storage and handling

KEEP SHEETS OUT OF THE RAIN

Sheets should be stored in a dry area to reduce the risk of condensation forming inside the cells.

KEEP SHEETS OUT OF THE SUN

Whilst storing sheets with the protective film still intact, it is advised to keep material away from direct sunlight, as a build up in temperature can make the protective film difficult to remove.

SHEET HANDLING

Sheets should be handled with care to avoid damage in terms of impact or scratching, which could compromise the performance of the material.

SHEET STORAGE

Up to three pallets or packs can be stored on top of each other. However, in order to avoid the sheets coming into contact with potentially damaging objects, spacers or planks should be placed in between each pallet or pack.

USING LIFT TRUCKS

A forklift truck with forks which can be spaced at least 2m apart is recommended for safe and easy handling of pallets or packs. Exercise caution during handling of the load and avoid sudden movements so to keep the load evenly across the forks.

HANDLING BY HAND

When handling individual sheets manually, two people should carry each sheet on its side. Lifting a sheet cleanly off the pallet and lying it on its side against the pallet is highly recommended, as dragging a sheet against another may cause damage.

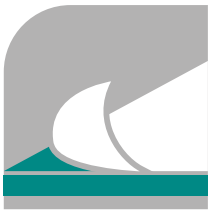
TECHNICAL MANUAL

For installation and usage details of the products please refer to our technical manual.

Installation instructions

ALLOW FOR POLYCARBONATE'S THERMAL EXPANSION

At least one whole cell width should be allowed between fixings. An allowance for thermal expansion should be added to this measurement.



REMOVING PROTECTIVE FILM AFTER INSTALLATION

A printed film is applied to the external side of each sheet. Removal of this film is essential after installation of the product.

SHEET SEALING

Where sealing is necessary, only use silicone sealant, gaskets and paints which are strictly compatible with polycarbonate.

SHEET TAPING

It is necessary to seal the ends of each sheet with adhesive aluminium tape, in order to avoid any dirt, moisture or foreign objects entering the cells.

SHEET CUTTING

Sheets can be cut using most conventional machine saws with fine tooth sawblades, such as vertical, horizontal or circular cutters or reciprocating saws.

SHEET DRILLING

Sheets can easily be drilled, provided suitable drill bits are used. However, piercing the sheet with through fixings is not recommended unless suitable allowance for thermal expansion is given.

Maintenance

SHEET CLEANING

Cleaning at least twice per year with a non-alkaline water-based detergent is recommended. Do not use abrasive equipment or solvents which could easily damage the surface of the sheet.

DO NOT WALK ON TOP OF SHEETS

Do you not walk directly on top of sheets during installation. A suitable supporting structure placed over the sheets to distribute weight evenly is recommended.

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